

Title (en)

GATE STACK ENGINEERING BY ELECTROCHEMICAL PROCESSING UTILIZING THROUGH-GATE-DIELECTRIC CURRENT FLOW

Title (de)

GATE-STAPEL-TECHNIK DURCH ELEKTROCHEMISCHE VERARBEITUNG MIT EINEM STROMFLUSS DURCH GATE-DIELEKTRIKUM

Title (fr)

CREATION D'UN EMPILEMENT DE GRILLE PAR TRAITEMENT ELECTROCHIMIQUE COMPRENANT L'UTILISATION D'UN COURANT A TRAVERS LE DIELECTRIQUE DE GRILLE

Publication

**EP 1846947 A1 20071024 (EN)**

Application

**EP 05852630 A 20051202**

Priority

- US 2005043466 W 20051202
- US 5079005 A 20050127

Abstract (en)

[origin: US2006166474A1] A method is provided for electroplating a gate metal or other conducting or semiconducting material directly on a dielectric such as a gate dielectric. The method involves selecting a substrate, dielectric layer, and electrolyte solution or melt, wherein the combination of the substrate, dielectric layer, and electrolyte solution or melt allow an electrochemical current to be passed from the substrate through the dielectric layer into the electrolyte solution or melt. Methods are also provided for electrochemical modification of dielectrics utilizing through-dielectric current flow.

IPC 8 full level

**H01L 21/302** (2006.01); **H01L 29/745** (2006.01)

CPC (source: EP US)

**C25D 3/50** (2013.01 - EP US); **C25D 5/02** (2013.01 - EP US); **C25D 5/024** (2013.01 - EP US); **C25D 5/54** (2013.01 - EP US); **C25D 5/56** (2013.01 - EP US); **C25D 7/123** (2013.01 - EP US); **C25D 9/04** (2013.01 - EP US); **C25F 3/14** (2013.01 - EP US); **H01L 21/28079** (2013.01 - EP US); **H01L 21/28114** (2013.01 - EP US); **H01L 21/2885** (2013.01 - EP US); **H01L 21/76885** (2013.01 - EP US); **H01L 29/513** (2013.01 - EP US); **H01L 29/517** (2013.01 - EP US); **H01L 29/78648** (2013.01 - EP US)

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DOCDB simple family (publication)

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**US 5079005 A 20050127**; CN 200580047267 A 20051202; EP 05852630 A 20051202; JP 2007553097 A 20051202; TW 95100289 A 20060104; US 2005043466 W 20051202; US 4035008 A 20080229